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EXAMINER

LE, DUY K

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 06/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,682

Applicant(s)

HURTTA ET AL.

Examiner

Duy K Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003 and 18 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Supplemental Amendment received on January 14, 2004 (filed on November 17, 2003) and amendment filed on March 18, 2004.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in United Kingdom on 11/22/1999. It is noted, however, that applicant has not filed a certified copy of the 9927597.6 application as required by 35 U.S.C. 119(b).

Drawings

3. The drawings are objected to because Figures 1 and 2 do not have descriptive labels for the boxes. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 29, 35-49, 51-52, 54, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/26739 to Kari et al. in view of Nguyen et al. (WO 99/27723).

As to claim 29, the Kari reference (Figure 1) discloses a method for performing charging in a telecommunications system ("it is object of the present invention to enable billing in packet

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radio networks. A further object of the present invention is a charging information collecting system which is independent of the billing system implementation in a packet radio network” (page 3, lines 4-9)), comprising:

storing subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system (“user-related data transfer statistics, used for charging the user, are also collected mainly at the serving GPRS support nodes SGSN, and in the gateway GPRS support nodes GGSN. The SGSN collects information about the radio interface usage and the GGSN collects information about the data network usage. Typically, charging in the packet radio system consists of subscriber fees and traffic fees. The subscriber fee is a regular payment paid by the subscribers to cover a specific period of time. The traffic fees are typically determined in a packet radio network as a function of data amount and service, possibly service quality as well” (page 8, lines 6-17)).

providing by means of packet data interface apparatus (SGSN) packet data communication services to the first terminal (MS), the packet data interface apparatus being capable of interfacing between the first communication terminal and a packet-switched data link to another communications terminal (“the mobile communication network may offer either a circuit switched connection or a packet switched data packet transfer scheme between the mobile station MS and the serving support node SGSN” (page 6, lines 17-20));

generating by means of the packet data interface apparatus charging messages indicative of the usage of the packet data communication services by the first terminal (“user-related data transfer statistics, used for charging the user, are also collected mainly at the serving GPRS

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support nodes SGSN, and in the gateway GPRS support nodes GGSN” (page 8, lines 6-9). “In case the SGSN or GGSN collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type” (page 9, lines 20-31));

transferring the charging messages to charging apparatus (“in case the SGSN or GGSN collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type. The BGGSN receiving the data packet forwards the charging information to the operator’s charging center BC” (page 9, lines 20-33));

the method further including the steps of:

transferring the charging arrangement information to the packet data interface apparatus; and storing at the packet data interface the charging arrangement information for the first communication terminal (“user-related data transfer statistics, used for charging the user, are also collected mainly at the serving GPRS support nodes SGSN, and in the gateway GPRS support

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nodes GGSN” (page 8, lines 6-9)); and wherein the step of generating charging messages comprises generating the said charging messages dependent on the charging arrangement information for the first communication terminal (“typically, charging in the packet radio system consists of subscriber fees and traffic fees. The subscriber fee is a regular payment paid by the subscribers to cover a specific period of time. The traffic fees are typically determined in a packet radio network as a function of data amount and service, possibly service quality as well” (page 8, lines 11-17)).

However, the Kari reference does not disclose storing at a subscriber information store subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system. The Nguyen reference teaches storing at a subscriber information store subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system (“in a conventional cellular communications system, a one-to-one relationship is typically maintained between the mobile station and the subscription for that mobile station (page 1, lines 10-12). “The subscription defines not only to whom billing for cellular services should be charged, but also sets forth the particular types of cellular calling services and features that are to be provided to the subscriber. Once the subscription to cellular calling services and features have been defined, this data is collected in a subscriber service profile that is stored and maintained in a database” (page 1, lines 14-18). “The home location register (HLR) of the cellular network stores plural service profiles for such subscribed mobile stations. Each of the service profiles is associated with a different billing identification” (page 2, lines 13-15). “A billing center 46 for the service provider receives

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toll tickets (TTs) relating to calling charges, processes the toll tickets with respect to the mobile station and particular active service profile thereof, and then according generates a separate billing statement for each identification 44(n) effectively allocating cellular service costs properly among various usages and subscribers” (page 6, lines 19-24)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kari to comprise storing at a subscriber information store subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system, as taught by Nguyen, in order to provide charging on a per service profile basis.

As to claim 35, Kari-Nguyen discloses a method as claimed in claim 29. The Kari reference further discloses the charging message is indicative of the duration and/or type of the communication (“typically, charging in the packet radio system consists of subscriber fees and traffic fees. The subscriber fee is a regular payment paid by the subscribers to cover a specific period of time. The traffic fees are typically determined in a packet radio network as a function of data amount and service, possibly service quality as well” (page 8, lines 11-17)).

As to claim 36, Kari-Nguyen discloses a method as claimed in claim 29. The Kari reference further discloses the charging message is indicative of an amount of data transferred in the communication (“in case the SGSN or GGSN collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the

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data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type” (page 9, lines 20-31)).

As to claim 37, Kari-Nguyen discloses a method as claimed in claim 29. As cited in claim 36, the Kari reference further discloses the charging message is indicative of the identity of the first communication terminal (“the data field may contain subfields which contain the IMSI, data amount and the service type” (page 9, lines 30-31). As interpreted by examiner, the IMSI is the identity of the communication terminal).

As to claim 38, Kari-Nguyen discloses a method as claimed in claim 29. The Kari reference further discloses the charging message is a CDR ticket (“in the GSM mobile communication network, the billing records (Call Detailed Records or “CDR”) are typically generated at the mobile communication network or in an Intelligent Network IN coupled thereto” (page 2, lines 24-28)).

As to claim 39, Kari-Nguyen discloses a method as claimed in claim 29. The Nguyen reference further discloses the step of transferring the charging arrangement information to the packet data interface apparatus is performed during attachment of the first communication terminal to the telecommunications system (“when a mobile station 14 makes an initial registration with the system through a particular switching node 12, that switching node requests a subscriber service profile 36 or 38(n) relating to that mobile station, and its corresponding subscription, from the home location register 20” (page 5, lines 11-14)).

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As to claim 40, Kari-Nguyen discloses a method as claimed in claim 29. The Nguyen reference further discloses the subscriber information store is a home location register (“the home location register 20 stores information relating to the mobile stations 14 and their subscriptions comprising location information and service profile information” (page 4, lines 2-4)).

As to claim 41, Kari-Nguyen discloses a method as claimed in claim 40. The Nguyen reference further discloses the home location register stores information indicative of access point names available to the first terminal, and the method includes the step of accessing that information (“the home location register 20 is preferably implemented in conjunction with the service control point 48. The service control point 48 provides a centralized processing platform for implementing the “intelligence” of the network 10. In the context of the present invention, this intelligence comprises the administration over the plural service profiles 38(n) available to certain ones of the mobile stations 14” (page 9, line 36 to page 10, line 4)).

As to claim 42, Kari-Nguyen discloses a method as claimed in claim 29. The Kari reference further discloses the packet data interface apparatus is capable of interfacing between a packet radio connection with the first communication terminal and a packet-switched data link to the other communications terminal (“the mobile communication network may offer either a circuit switched connection or a packet switched data packet transfer scheme between the mobile station MS and the serving support node SGSN” (page 6, lines 17-20). The support nodes (SGSN, GGSN) are connected to an intra-operator packet switched backbone network (13) (Abstract, lines 3-4)).

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As to claim 43, Kari-Nguyen discloses a method as claimed in claim 42. The Kari reference further discloses the packet radio connection is a general packet radio service (GPRS) connection ("the subnetwork comprises a group of packet data service nodes SN, herein referred to as serving GPRS support nodes SGSN, each of which is connected to the GSM mobile communication network so that it is able to provide mobile data terminal equipments with a packet data service via a multitude of base stations i.e. cells" (page 1, line 31 to page 2, line 2)).

As to claim 44, Kari-Nguyen discloses a method as claimed in claim 29. The Kari reference further discloses the packet data interface apparatus comprises a serving GPRS support node (SGSN) ("the mobile communication network may offer either a circuit switched connection or a packet switched data packet transfer scheme between the mobile station MS and the serving support node SGSN" (page 6, lines 17-20); Figure 1)).

As to claim 45, Kari-Nguyen discloses a method as claimed in claim 44. The Kari reference further discloses the charging arrangement information for the first communication terminal is stored at the SGSN ("the serving support nodes (SGSN) and the gateway support nodes collect charging information on usage of the radio interface and the data network (15), respectively" (Abstract, lines 4-5)).

As to claim 46, Kari-Nguyen discloses a method as claimed in claim 29. The Kari reference further discloses the packet data interface apparatus comprises a global GPRS support node (GGSN) ("the packet radio system comprises packet radio support nodes (SGSN) connected to the mobile communication network, as well as gateway support nodes ("GGSN") for providing an inter-connection to an external packet data network (15). The support nodes

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(SGSN, GGSN) are connected to an intra-operator packet switched backbone network (13)” (Abstract, lines 2-4)).

As to claim 47, Kari-Nguyen discloses a method as claimed in claim 46. The Kari reference further discloses the charging arrangement information for the first communication terminal is stored at the GGSN (“user-related data transfer statistics, used for charging the user, are also collected mainly at the serving GPRS support nodes SGSN, and in the gateway GPRS support nodes GGSN” (page 8, lines 6-9)).

As to claim 48, Kari-Nguyen discloses a method as claimed in claim 46. The Kari reference further discloses the step of transferring the charging arrangement information to the packet data interface apparatus comprises transferring the charging arrangement information to the SGSN (“user-related data transmission statistics, used for charging the user, are normally gathered at the serving GPRS support nodes SGSN and at the gate GPRS support nodes GGSN” (page 2, lines, 15-18)).

As to claim 49, Kari-Nguyen discloses a method as claimed in claim 48. The Kari reference further discloses the steps of transferring the charging arrangement information from the SGSN to the GGSN (“in case the support node collecting charging information wishes to transmit charging information of a specific subscriber, it transmits the information to a specific billing gateway GPRS support node which forwards the charging information, either directly or indirectly, to the operator’s charging system” (page 4, lines, 8-13)).

As to claim 51, Kari-Nguyen discloses a method as claimed in claim 46. The Kari reference further discloses the step of determining whether a communication with the first terminal is liable to charging is performed by means of the SGSN and the GGSN (“user-related

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data transfer statistics, used for charging the user, are also collected mainly at the serving GPRS support nodes SGSN, and in the gateway GPRS support nodes GGSN. The SGSN collect information about the radio interface usage and the GGSN collects information about the data network usage. Typically, charging in the packet radio system consists of subscriber fees and traffic fees. The subscriber fee is a regular payment paid by the subscribers to cover a specific period of time. The traffic fees are typically determined in a packet radio network as a function of data amount and service, possibly service quality as well" (page 8, lines 6-17)).

As to claim 52, Kari-Nguyen discloses a method as claimed in claim 51. The Kari reference further discloses the step of generation of the charging messages is performed by means of the GGSN and SGSN ("in case the SGSN or GGSN collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type" (page 9, lines 20-31)).

As to claim 54, Figure 1 in Kari shows a telecommunications system comprising:
packet data interface apparatus (SGSN) for providing packet data communication services to the first terminal (MS), the packet data interface apparatus being capable of interfacing between the first communication terminal and a packet switched data link to another communications terminal, and generating charging messages indicative of the usage of the

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packet data communication services by the first terminal ("the mobile communication network may offer either a circuit switched connection or a packet switched data packet transfer scheme between the mobile station MS and the serving support node SGSN" (page 6, lines 17-20).

"User-related data transfer statistics, used for charging the user, are also collected mainly at the serving GPRS support nodes SGSN, and in the gateway GPRS support nodes GGSN" (page 8, lines 6-9));

message transfer apparatus for transferring the charging messages to charging apparatus ("in case the SGSN or GGSN collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type" (page 9, lines 20-31));

and wherein the packet data interface apparatus is adapted to receive and store the charging arrangement information for the first communication terminal and to generate the said, charging messages dependent on the charging arrangement information for the first communication terminal ("user-related data transfer statistics, used for charging the user, are also collected mainly at the serving GPRS support nodes SGSN, and in the gateway GPRS support nodes GGSN" (page 8, lines 6-9). "Typically, charging in the packet radio system consists of subscriber fees and traffic fees. The subscriber fee is a regular payment paid by the subscribers to cover a specific period of time. The traffic fees are typically determined in a packet radio

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network as a function of data amount and service, possibly service quality as well” (page 8, lines 11-17)).

However, the Kari reference does not disclose a subscriber information store storing subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system. The Nguyen reference teaches a subscriber information store storing subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system (“in a conventional cellular communications system, a one-to-one relationship is typically maintained between the mobile station and the subscription for that mobile station (page 1, lines 10-12). “The subscription defines not only to whom billing for cellular services should be charged, but also sets forth the particular types of cellular calling services and features that are to be provided to the subscriber. Once the subscription to cellular calling services and features have been defined, this data is collected in a subscriber service profile that is stored and maintained in a database” (page 1, lines 14-18). “The home location register (HLR) of the cellular network stores plural service profiles for such subscribed mobile stations. Each of the service profiles is associated with a different billing identification” (page 2, lines 13-15)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Kari to comprise a subscriber information store storing subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system, as taught by Nguyen, in order to provide charging on a per service profile basis.

As to claim 55, Kari-Nguyen discloses a system as claimed in claim 54, wherein charging apparatus is capable of performing a charging operation to attribute to a subscriber for the first communications terminal a charge for use of the communication services by the first terminal (Kari; "in case the SGSN or GGSN collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type. The BGGSN receiving the data packet forwards the charging information to the operator's charging center BC" (page 9, lines 20-33). Nguyen; "a billing center 46 for the service provider receives toll tickets (TTs) relating to calling charges, processes the toll tickets with respect to the mobile station and particular active service profile thereof, and then according generates a separate billing statement for each identification 44(n) effectively allocating cellular service costs properly among various usages and subscribers" (page 6, lines 19-24)).

6. Claims 30, 33-34, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/26739 to Kari et al. in view of Nguyen et al. (WO 99/27723) and further in view of Council (U.S. Patent 6,483,910).

As to claim 30, Kari-Nguyen discloses a method as claimed in claim 29, wherein the step of generating the charging messages comprises: generating a charging message for the communication if the communication is liable to charging (Kari; "in case the SGSN or GGSN

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collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type” (page 9, lines 20-31)); and a charging operation to attribute to a subscriber for the first communications terminal a charge for use of the communication services by the first terminal is performed by means of the charging apparatus ((Kari; “in case the SGSN or GGSN collecting charging information wishes to transmit charging information of a specific subscriber (identified with e.g. an international mobile subscriber identity IMSI in the GPRS system) to the charging center BC, it transmits the information in data packets corresponding to the protocol (e.g. IP) of the backbone network, the data packets containing the network address (e.g. IP address) of a specific BGGSN. The data field of the data packet may contain the charging information in a suitable format. The data field may contain subfields which contain the IMSI, data amount and the service type. The BGGSN receiving the data packet forwards the charging information to the operator’s charging center BC” (page 9, lines 20-33). Nguyen; “a billing center 46 for the service provider receives toll tickets (TTs) relating to calling charges, processes the toll tickets with respect to the mobile station and particular active service profile thereof, and then according generates a separate billing statement for each identification 44(n) effectively allocating cellular service costs properly among various usages and subscribers” (page 6, lines 19-24)).

However, Kari-Nguyen does not disclose determining on the basis of the charging arrangement information for the first communication terminal stored at the packet data interface apparatus whether a communication with the first terminal is liable to charging. The Council reference teaches the step of determining on the basis of the charging arrangement information for the first communication terminal stored at the packet data interface apparatus whether a communication with the first terminal is liable to charging ("the computer of the switching module 20 then compares the calling party's telephone number with the telephone numbers contained in the list, as indicated at blocks 33 and 34, and makes a determination as to whether the calling party's telephone number is contained on the list of authorized calling parties. If so, the calling party is connected to the called party by the switching module without a fee being charged to the calling party's account, as indicated at block 35. If not, the calling party is charged a fee and the calling party is connected with the called party, as indicated at block 36" (Col. 4, lines 14-24); Figure 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kari-Nguyen wherein the step of generating the charging messages comprising determining on the basis of the charging arrangement information for the first communication terminal stored at the packet data interface apparatus whether a communication with the first terminal is liable to charging, as taught by Council, in order to determine fee to be charged to the calling party.

As to claim 33, Kari-Nguyen-Council discloses a method as claimed in claim 30. As cited in claim 30, the Council reference discloses it is determined that a communication is not liable for charging if charging arrangement information for the first communication terminal stored at

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the packet data interface apparatus indicates that the communication is free of charge (“a determination as to whether the calling party’s telephone number is contained on the list of authorized calling parties. If so, the calling party is connected to the called party by the switching module without a fee being charged to the calling party’s account, as indicated at block 35” (Col. 4, lines 17-22)).

As to claim 34, Kari-Nguyen-Council discloses a method as claimed in claim 30. As cited in claim 30, the Council reference discloses it is determined that a communication is not liable for charging if a session itself indicates that the communication is free of charge (“a determination as to whether the calling party’s telephone number is contained on the list of authorized calling parties. If so, the calling party is connected to the called party by the switching module without a fee being charged to the calling party’s account, as indicated at block 35” (Col. 4, lines 17-22)).

As to claim 50, Kari-Nguyen discloses a method as claimed in claim 49. However, it does not disclose the step of transferring the charging arrangement information from the SGSN to the GGSN is performed if it is determined that the communication is subject to hot billing. The Council reference teaches the step of transferring the charging arrangement information from the SGSN to the GGSN is performed if it is determined that the communication is subject to hot billing (“a determination as to whether the calling party’s telephone number is contained on the list of authorized calling parties. If so, the calling party is connected to the called party by the switching module without a fee being charged to the calling party’s account, as indicated at block 35. If not, the calling party is charged a fee and the calling party is connected with the called party, as indicated at block 36. The calling party’s billing account is then updated, as

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indicated at block 37” (Col. 4, lines 17-26). “For example, the operations occurring at block 37 may be performed prior to the calling party actually being connected to the called party” (Col. 4, lines 32-35). As interpreted by examiner, the billing or charging is done promptly before a call is made and is functionally equivalent to hot billing).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kari-Nguyen wherein the step of transferring the charging arrangement information from the SGSN to the GGSN is performed if it is determined that the communication is subject to hot billing, as taught by Council, in order to determine whether the calling party’s billing account is current before setting up a call.

7. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/26739 to Kari et al. in view of Nguyen et al. (WO 99/27723) in view of Council (U.S. Patent 6,483,910) and further in view of Walker et al. (U.S. Patent 6,597,776).

As to claim 31, Kari-Nguyen-Council discloses a method as claimed in claim 30, wherein it is determined that a communication is not liable for charging if charging arrangement information for the first communication terminal stored at the packet data interface apparatus indicates that the communication is free of charge. However, it does not disclose for when the communication is subject to the flat rate payment. The Walker reference teaches the flat rate payment (“the caller would be charged a flat rate for the “secret number” with, e.g., a free week of content. This allows the caller to simply call the number without having to input any account or related information” (Col. 9, lines 45-48)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kari-Nguyen-Council wherein it is determined

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that a communication is not liable for charging if charging arrangement information for the first communication terminal stored at the packet data interface apparatus indicates that the communication is subject to the flat rate payment, as taught by Walker, in order to allow a caller to simply call the number without having to input any account or related information.

As to claim 32, Kari-Nguyen-Council discloses a method as claimed in claim 30, wherein it is determined that a communication is not liable for charging if charging arrangement information for the first communication terminal stored at the packet data interface apparatus indicates that the communication is free of charge. However, it does not disclose for when the communication is subject to pre-payment. The Walker reference teaches the pre-payment ("referring to FIG. 6A, the process begins at step 605, where the transaction processor 200 receives a telephone call from the caller device 110. At step 610, the IVRU of the call interface 250 of the transaction processor 200 requests from the caller an account identifier associated with a prepaid account in the prepaid account database 300" (Col. 6, lines 31-36). "The caller's prepaid account(s) are debited (step 710) according to the amount determined during the monitoring of step 665" (Col. 8, lines 8-10). See Figures 6A-6E).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kari-Nguyen-Council wherein it is determined that a communication is not liable for charging if charging arrangement information for the first communication terminal stored at the packet data interface apparatus indicates that the communication is subject to pre-payment, as taught by Walker, in order to allow a caller to make payment using pre-paid medium.

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8. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/26739 to Kari et al. in view of Nguyen et al. (WO 99/27723) and further in view of Horneman et al. (U.S. Patent 6,560,460).

As to claim 53, Kari-Nguyen discloses a method as claimed in claim 29. However, it does not expressly disclose the telecommunications system is a universal mobile telecommunications system (UMTS). The Horneman reference teaches the telecommunications system is a universal mobile telecommunications system (UMTS) ("with respect to further development of the present GSM/DCS 1800 system and the UMTS system under development as well as with respect to other future mobile telephone systems it is essential that in addition to speech and data, data requiring a greater transmission capacity, e.g. moving video pictures, can also be transmitted in them" (Col. 1, lines 24-29). "In addition to the service class, the user also receives more specific information on the grade of service, e.g. the transmission speed, transmission method, error correction method, charging related to the service class or other information concerning the use" (Col. 5, lines 62-67)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Kari-Nguyen wherein the telecommunications system is a universal mobile telecommunications system (UMTS), as taught by Horneman, in order to enable economical and optimal use of the transmission capacity for advanced mobile telephone systems.

Response to Arguments

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9. Applicant's arguments filed on March 18, 2004 have been fully considered but they are not persuasive.

Regarding independent claim 29, as cited in Office action, the Kari reference teaches or suggests storing subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system (see page 8, lines 6-17). It does not explicitly disclose storing at a subscriber information store the subscription information. As cited in Office action, the Nguyen reference teaches or suggests storing at a subscriber information store the subscription information (see page 1, lines 10-12, lines 14-18, and page 6, lines 19-24). Regarding "generating by means of the packet data interface apparatus charging messages..." in claim 29, as cited in Office action, the Kari reference does teach or suggest the generation of charging messages by a packet data interface (see page 8, lines 6-9 and page 9, lines 20-31).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy K Le whose telephone number is 703-305-5660. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Duy Le
May 28, 2004


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